Some twenty years ago a Danish scientific expedition paid two visits to the Persian Gulf to report on the fish found in it. They discovered that there were over 400 species.

## AGRICULTURE

Parts of Bahrain have always been fertile and very probably in ancient times more land was under cultivation than is being used today. The gardens of Bahrain are mentioned by many ancient visitors to the islands. The captains of Alexander's ships described Tylos, the ancient name of Bahrain, as "well-wooded and productive" while Idrisi, writing in the 12th century, says that the "capital of Awal (Bahrain Island) is Bahrain; this is a town well populated whose environs are fertile and produce corn and dates in abundance." It could be that the capital of Bahrain mentioned by Idrisi was Bilad al-Qadim, the description would seem to imply this.

Formerly the Bahrain gardens were irrigated from natural springs and surface wells, the water either flowing from the springs into the gardens or being lifted from wells to the level of the land by various forms of water scoops. The most commonly used is the Shaduf. A man stands near the edge of the well and draws up the water in a sheep skin bag attached by ropes to a counter-balanced pole. In larger wells donkeys or oxen are used, walking endlessly up and down a ramp pulling the water to the surface from where it runs down into irrigation channels. As the rainfall in Bahrain is almost negligible all agriculture depends upon irrigation.

In the 20's and 30's Major Frank Holmes drilled many artesian wells in Bahrain which completely changed Bahrain's system of irrigation. By introducing these wells into the island Major Holmes did much to increase the area of land which could be cultivated, but artesian wells turned out to be a mixed blessing, for in the following years so many wells were drilled that the water head went down and some of the gardens in the south of Bahrain dried up. Today this problem is being met by a government Water Committee which decides whether and under what conditions new wells may be drilled, it tries to ensure that the water resources of the islands are maintained at their present level or even increased by the utilisation of the many large springs of fresh water which lie under the sea around the shores of Bahrain.

The two commonest crops in Bahrain are dates and lucerne (alfalfa). the latter is often grown in the shade of the date palms where its vivid greenness provides a contrast to the brown and grey-green of the date palms. There is little good fruit in Bahrain although a certain number of fruit trees are cultivated, these include citrus, tamarind, pomegranate, fig, guava, terminalia (indian almond) mango, bananas, grapes and kanard (a small apple-like fruit). European vegetables are grown in the cold weather and other ground crops include sweet potatoes, melons, tomatoes, ladies fingers, egg plants, onions, garlic and pumpkins.

2: Belgrave G-4 (no date) 1935 MZ2 Bahrain MZ2



base and less affected by climate and disease, and they had not been long enough in the Gulf to acquire the reputation for rapacity and cruelty which characterized the Portuguese.

In 1553 the Sultan appointed Sidi Ali Chalabi as Admiral of the Turkish fleet, with orders to recover the Turkish ships which had been abandoned in Basra after the piratical exploits of Piri Beg. Sidi Ali was a distinguished Turk, a poet, a writer on navigation, and a brave fighter. He wrote a book about his travels and adventures, in which he described his experiences in the Iranian Gulf. He travelled from Aleppo to Basra by land, a journey which took several months, and he took over charge of the ships at Basra from Murad Beg, formerly the Governor of Katif. After repairing and equipping the Turkish galleys, Sidi Ali set sail from Basra and cruised down the Gulf, visiting various ports, including Bushire, Katif and Bahrain. At the last place he stayed a little time. The islands were governed on behalf of the Portuguese by a local ruler, Rais Murad, who received Sidi Ali with friendliness and showed him, among other things, the strange springs of fresh water coming up from the bed of the sea. When Sidi Ali made enquiries about the Portuguese he received evasive answers.

On leaving Bahrain he met a strong Portuguese fleet in the neighbourhood of Muscat; there were twelve large ships of war and twenty-two smaller ones. Their mizzen sails were set and their gilded beak-heads, towering forecastles, and masts gay with bunting obscured the horizon. Undaunted by their superior numbers, the gallant Turkish Admiral attacked the enemy. The ships bombarded each other with cannon; then they came closer, and the fighting men hurled down javelins and arrows from the high turrets while the sweating slaves tugged at the oars. Finally, they grappled and fell upon each other, fighting fiercely with swords and spears. Five Turkish galleys were destroyed, and there was great loss on both sides; many of the refugees landed on the shore, where they were hospitably treated by the natives, but eventually the remainder of the Turkish fleet made its way down the Gulf.

Shortly afterwards the Turks made a determined effort to capture Bahrain. In 1559 a powerful force of 1,200 Turks and Janissaries, in two galleys and seventy barques, was sent against the islands. Rais Murad was still the Governor, and the Portuguese sent a fleet from Hormuz to his assistance. On the way it met some Turkish ships and drove them on to the shore. The Turks had landed and besieged the fortress, and when the Portuguese arrived they had a council of war and decided to

4: Bahrain G-5 (no date) 1953 / MZ2 Bahrain MZ2



659 133 **Aerial Survey.** One of the most important items in general use is a map, and throughout history it has been found that the mapping of new areas has been among the first of man's activities.

1-14 The first reliable maps of Bahrain was produced in 1905, following a survey of the island which was carried out under the direction of Lieut. Colonel F. B. Longe, R.E., Surveyor-General of India. This map, copies of which can still be obtained in the Land Department, is a very good map and shows towns, villages, tracks, mounds and contours, but as it was produced many years ago, since when there have been many changes in the towns and villages and in the area under cultivation, it was thought desirable to carry out a new survey. Messrs. Hunting Aerosurveys Ltd., were commissioned to make an aerial survey of Muharraq Island, Manama town and the area south of Manama as far as the coast. This work was carried out in December 1951. In May 1952 the survey was extended by arrangement with the Bahrain Petroleum Company to cover the whole of Bahrain Island and the neighbouring islands.

During the first survey both vertical and oblique photographs were taken and by the end of 1952 a considerable amount of interesting material had arrived in Bahrain. It consisted of 51 oblique photographs produced in two sizes, 10-in. × 12-in. and 5-in. × 5 in. The series of vertical photographs covered the whole of the area which had been included in the survey.

From the vertical photographs maps were produced, one covering the whole of Muharraq Island, Muharraq town in seven sections at a scale of 200 feet to an inch, the area south east of Manama as far as Jufair, also in seven sections, on a scale of 200 feet to an inch and the town of Manama in thirteen sections, one for each district, a scale of 100 feet to an inch. In addition, mosaics of Manama and Muharraq were produced. All these photographs and mosaics are on sale to the public and can be obtained from the Land Department.

Following the first survey, the Bahrain Petroleum Company made available to the Government all the material which they had obtained from the aerial survey which had been carried out on their behalf and they also provided valuable information from their land surveys which included an initial survey of the town of Manama which was done some months before the aerial work. Last year all the available information was collected and a map was hand-drawn on the basis of this information. Hunting Aerosurveys was instructed to produce a map of Bahrain, in four colours, on the scale of 1 inch to the mile. The map is now in the hands of the printers. It will cover the whole of Bahrain and Muharraq islands as well as the nearby smaller islands, but not the Hawar group. It will contain inserts showing the town areas of Manama, Muharraq and Awali. This map will be on sale in London and New York, as well as in Bahrain, on plain paper or mounted on linen or folded on linen. To produce this map information has been obtained from the Survey of India Office, the Royal Geographical Society and the Bahrain Petroleum Company and from the War Office map of 1939 and with the information now available it will be a reasonable task to revise the map, in future, should it require again bringing up to date after some years have passed.

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## SUNNI WAQF DEPARTMENT

(From the report of Shaikh Atiyyatallah bin Abdurrehman AlKhalifah, Superintendent of the Department)

647 871 795 The Department is controlled by a committee of Sunni merchants and by a Superintendent and clerical staff, the latter are paid by the Government. All Waqf property is administered by the Departme[illegible] pays out of the revenue collected from the property the salaries and emoluments of m[illegible]fficials, it also contributes towards the cost of the religious school in Manama and towards the expenses of some young men who are studying religion abroad.